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MISCELLANEOUS SERIES—BULLETIN No. 18.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF STATISTICS.

JOHN HYDE, Statistician.

THE COURSE OF PRICES

OF

FARM IMPLEMENTS AND MACHINERY

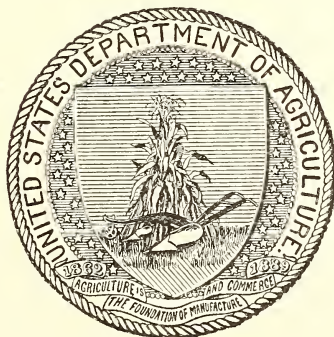
FOR

A SERIES OF YEARS.

BY

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE STATISTICIAN,
Washington, D. C., February 7, 1901.

SIR: I have the honor to transmit herewith a report on The Course of Prices of Farm Implements and Machinery for a Series of Years, prepared by Mr. George K. Holmes, of this office, the publication of which, as Bulletin No. 18, Miscellaneous Series, Division of Statistics, is respectfully recommended.

Respectfully,

JOHN HYDE, *Statistician.*

Hon. JAMES WILSON,
Secretary of Agriculture.

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THE COURSE OF PRICES OF FARM IMPLEMENTS AND MACHINERY FOR A SERIES OF YEARS.

Nothing has heretofore been published with regard to the trend of prices of agricultural implements and machinery, and perceiving this omission from statistical knowledge and having in view the importance of the subject in the development of agricultural industry in this country, the Department recently conducted an investigation to ascertain facts within such moderate limits as it seemed feasible to embrace.

CHARACTER OF THE INVESTIGATION.

It was necessary to depend on the mail for this purpose and to trust to the willingness of the manufacturers to respond in a form that would permit the tabulation of their statements. This they have done in a very satisfactory manner; and a large portion of the responses to the inquiry of the Department have come from manufacturers of national and even world-wide fame.

For reasons that will be readily understood, it is necessary to avoid revealing the identity of any of the manufacturers, and hence each establishment is referred to by an office number, even the name of the State in which the works are situated not being mentioned.

The endeavor was made to obtain prices for 1860, 1880, 1890, 1895, and 1900 for the date of July 1, or as near thereto as possible. Of course most of the establishments were not in existence in 1860 and many of them not even in 1880, but the figures presented in the table contained in this report are sufficiently indicative of the trend of prices.

Manufacturers were requested to report "cash prices of agricultural implements and machines delivered f. o. b., including commissions and other allowances to agents, but not including discounts for cash within thirty days."

Of course it is realized that agricultural implements and machinery have been immensely improved since 1860, and in many cases materially so since 1880, and even 1890, so that a comparison of prices for these years with those of 1900 does not fully represent the same implements or machines. This should be taken into account in connection with whatever information is published on the subject.

Many establishments manufacture at least a few varieties and grades of implements and machines of the same general description as, for instance, plows, harvesters, mowers, thrashers, harrows, etc. In view

of this fact, manufacturers were requested as follows: "In case your establishment manufactures varieties of the same implement or machine, please adopt for comparison the more standard one, which will, presumably, be the one of which you make the most sales."

Manufacturers very generally complied with this request; but the "standard" plows, for instance, of different establishments differ in their characteristics and in the cost of production, and consequently in selling price; therefore, in comparing various establishments with one another for the same general description of implement or machine, it will not be proper to regard these implements or machines as competitive unless upon differences of service.

MAGNITUDE OF THE INDUSTRY.

The manufacture of agricultural implements and machinery has grown to enormous proportions in this country, and has been developed here in the investment of capital, in the employment of labor, and especially in the multiplication of the varieties and excellencies of products far beyond any point reached in any other country. The latest available statistics with regard to this industry were obtained in the census of 1890, and these statistics are compared with those obtained in the census of 1880, as follows:

Number of establishments, 1,943 in 1880, and 910 in 1890; capital, \$62,109,668 in 1880, and \$145,313,997 in 1890; number of employees, 39,580 in 1880, and 42,544 in 1890; wages, \$15,359,610 in 1880, and \$21,811,761 in 1890; cost of materials, \$31,531,170 in 1880, and \$31,603,265 in 1890; value of products, \$68,640,486 in 1880, and \$81,271,651 in 1890.¹

SOME ECONOMIC RESULTS OF MACHINERY.

As relating to changes in prices, only a brief reference can be made to some of the more important results of the investigation of hand and machine labor and processes as applied to agriculture, with a contrast between farming as it was practiced forty to seventy years ago and farming as it may now be carried on with the advantage of the labor-saving and perfecting implements and machines of the present time, as well as with the implements, materials, and processes contributed by the chemist, the "book farmer," and the more enlightened experience of the last half century.²

¹If the reader desires to pursue this subject in directions that are statistical, technical, mechanical, and commercial, as they existed fifteen or twenty years ago, he is referred to the Report from the Consuls of the United States No. 48, December, 1884, on Agricultural Machinery, and to the Report on the Manufactures of Interchangeable Mechanism prepared for the Tenth Census (1880), under the direction of Prof. W. P. Trowbridge, by Charles H. Fitch, special agent, and published in the volume on Manufactures.

²Report of the United States Department of Labor on hand and machine labor, 1898.

A very interesting and striking contrast of this kind was given in an article¹ which appeared in the Yearbook for 1899. It is reproduced with slight revision in the following paragraphs. The actual methods, implements, and results of the earlier dates are contrasted with the most improved methods and machines of the later dates, and the results achieved therewith, under favorable circumstances. In other words, the contrast is between the actual agriculture of the middle of the century and the possible agriculture of the end of the century.

CORN CULTIVATION AND HARVESTING.

Between 1855 and 1894 the following changes took place in the cultivation of corn: The time of human labor required to produce 1 bushel of corn on an average declined from 4 hours and 34 minutes to 41 minutes, and the cost of the human labor to produce this bushel declined from 35 $\frac{3}{4}$ cents to 10 $\frac{1}{2}$ cents.

In the earlier years the plow and harrow of that period were used; the check rows were marked with the shovel plow; the seed was dropped by hand from a bucket or pouch carried by the farmer and covered with a hoe; the cultivation was done with a shovel plow; knives were used for cutting the stalks from the ground by hand; husking pegs were worn on the hand in husking; the stalks, husks, and blades were cut into fodder with an old-time machine turned by hand, and the corn was shelled by hand either on a frying-pan handle or on a shovel or by rubbing a cob against the unshelled ears.

A radical change had taken place in 1894. The earth was loosened with a gang plow, and a disk harrow very thoroughly pulverized it. A corn planter drawn by a horse planted the corn, and the top soil was pulverized afterwards with a four-section harrow.

When it came to harvesting the corn a self-binder drawn by horses cut the stalks and bound them, and the shocks of stalks were then hauled to a machine which removed the husks from the ears and in the same process cut the husks and the stalks and the blades into fodder, the power of the machine being supplied by a steam engine.

Then came the shelling of the corn, which is one of the most striking instances of the changes that have been wrought by machines. In this case, the machine operated by steam shelled 1 bushel of corn per minute, while in the old way the labor of one man was required for 100 minutes to do the same work.

WHEAT CULTIVATION AND HARVESTING.

The use of steam as a substitute for horsepower in plowing, in harvesting, and in thrashing wheat has not materially contributed to economy, except from a saving due to the elimination of animal power,

¹ Progress of Agriculture in the United States, by Geo. K. Holmes, Yearbook of the United States Department of Agriculture for 1899, p. 331.

so the more common power supplied by horses is here selected for the comparison. The years in contrast are 1830 and 1896.

It is one of the marvels of the age that the amount of human labor now required to produce a bushel of wheat from beginning to end is, on an average, only 10 minutes, whereas in 1830 the time was 3 hours and 3 minutes. During the interval between these years the cost of the human labor required to produce this bushel of wheat declined from $17\frac{3}{4}$ cents to $3\frac{1}{3}$ cents.

In the contrast thus presented the heavy, clumsy plow of the day was used in 1830; the seed was sown by hand and was harrowed into the ground by the drawing of bushes over it; the grain was cut with sickles, hauled to a barn, and at some time before the following spring was thrashed with flails; the winnowing was done with a sheet attached to rods, on which the grain was placed with a shovel and then tossed up and down by two men until the wind had blown out the chaff.

In the latter year, on the contrary, the ground was plowed and pulverized in the same operation by a disk plow; the seed was sown with a mechanical seeder drawn by horses; the reaping, thrashing, and sacking of the wheat was done with the combined reaper and thrasher drawn by horses, and then the wheat was ready to haul to the granary.

HAYMAKING.

Hay is the next selection for comparison, the years being 1860 and 1894. When men mowed the grass with scythes, spread it, and turned it over for drying with pitchforks, when they raked it into windrows with a hand rake, cocked it with a pitchfork, and baled it with a hand press, the time of human labor required per ton was $35\frac{1}{2}$ hours; but when for this method was substituted a mower, a hay tedder, and a hayrake and hay gatherer and stacker drawn by horses, and a press operated by a horse, the time of human labor was reduced to 11 hours and 34 minutes, while the cost of human labor from the earlier to the later year was reduced from \$3.06 to \$1.29.

The more noticeable economy in haymaking is in the mowing and curing of the grass. In these two operations the time of human labor declined per ton from 11 hours to 1 hour and 39 minutes, while the cost of the human labor declined from $83\frac{1}{3}$ cents to $16\frac{1}{4}$ cents.

The comparisons might be extended to many of the crops produced by the farmer, with a constantly recurring illustration of the saving of human labor and of the resulting diminution of the cost of production.

SAVING IN THE COST OF PRODUCING CROPS.

The potential saving in the cost of human labor on account of improved implements, machines, and processes, at the rate per bushel or ton, as the case may be, has been computed for seven of the principal crops of 1899; the comparison is between the old-time methods

of production, in which hand labor was assisted only by the comparatively rude and inefficient implements of the day, and the present time, when hand labor has not only the assistance of highly efficient and perfected implements and machinery but has been considerably displaced by them. The saving in the cost of human labor in cents per unit of product permits a very forcible statement of its equivalent in money by means of a computation consisting of the multiplication of the saving per unit into the crop of 1899. The result expresses the potential labor saving in the production of seven crops of that year and is not an aggregate of the saving of human labor in the cost of producing the crops for all the years between the earlier and the later ones, during which time this economizing and displacement of human labor has taken place. In the case of the crop of corn, the money measure of the saving of human labor required to produce it in 1899 in the most available economic manner, as compared with its production in the old-time manner, was \$523,276,642; wheat, \$79,194,867; oats, \$52,866,200; rye, \$1,408,950; barley, \$7,323,480; white potatoes, \$7,366,820; hay, \$10,034,868.

The total potential saving in the cost of human labor for these seven crops of 1899, owing to the possible utilization of the implements, machinery, and methods of the present time, in place of the old-time manner of production, reaches the stupendous amount of \$681,471,827 for this one year.

The foregoing statements express as nearly as possible within the limits of this report the important changes in the development of economic agriculture that have been wrought by the inventor, and at least a general understanding of this is necessary before considering the table that is made a part of this report. It is to the inventor, to the manufacturer, to the man who improves materials and reduces the cost of distribution of implements and machinery that the farmer is most indebted for the supremacy he has acquired in this country.

It should not be assumed, however, from the language used that the complicated agricultural machines mentioned in describing the agriculture of recent dates have come into general use throughout the country, or that the implements of the earlier agriculture have been altogether discarded. As a matter of fact the 2-horse walking plow, the hand corncutter, the husking peg, and the pitchfork are still in general use in the fields; while, on the other hand, the combined reaper and thrasher, the self-binding corn harvester, and the machine for husking the corn and cutting up the fodder have come into use only to a limited extent. Such machines are mainly adapted to use in farming on a large scale under favorable circumstances.

STATISTICS OF PRICES.

In the table above referred to no totals can be presented, but certain general conclusions can, nevertheless, be arrived at. It is

conspicuously the fact that from 1860 to 1895 the retail prices of agricultural machinery and implements have declined to an enormous extent, and this in spite of the fact that these implements and machines have in the meantime increased in efficiency, in durability, in workability, in lightness of weight, and in strength of materials. There has been a progress from wood to iron and from iron to steel, and from large patterns to small ones; and during the same time there has been an increased utilization of applied power.

From 1895 to 1900 it will be noticed that in the case of many establishments there has been an increase of prices. In connection with this it should be borne in mind that the financial depression which began in May, 1893, and continued until about 1897, had a disturbing effect upon manufacturing industries and that, when the business revival began, a considerable increase in the prices of materials used in manufacturing occurred and that this lasted for a considerable length of time. On this account the retail prices of agricultural implements and machines as reported for the midsummer of 1900 show an increase which must be regarded as abnormal. This expresses the general consensus of opinion of the manufacturers of agricultural implements and machines in this country, and is a repetition of previous industrial experiences following financial depressions.

INSTANCES OF CHANGES.

Some comment upon the table presented may not be out of place and the comparisons will be made between 1880 and 1900 unless otherwise indicated. It is to be understood that the comparisons refer to retail prices—that is, prices paid by the farmers—all profits and commissions of merchants and agents being included, unless some qualification of this statement is expressed. It should be borne in mind that the quotations are from individual returns.

The trend of the prices of carriages and buggies has been downward to a very marked degree, the decline often being from 25 to 50 per cent. This is a common observation with regard to prices of most of the agricultural implements and machines that are mentioned in the table. In the case of one manufacturer, surreys selling at \$225 in 1880 sold at \$85 in 1900; top buggies, with a price of \$90 in 1860 and \$60 in 1880, sold for \$43 in 1900.

Two-horse walking cultivators that sold for \$20 in 1880 had the price of \$13 in 1900; disk cultivators that sold for \$30 in 1890 had the price of \$25 in 1900; spring-tooth horse hoes, worth \$9 in 1880, were worth only \$6 in 1900.

The corn drills of 1880 had the price of \$12, and in 1890, \$8; fertilizer drills in 1880, \$90, and those of 1900, \$70; the grain drills of 1860, \$90, and those of 1900, \$50. Harrows declined from \$15 in 1880 to \$10 in 1900; plain float spring-tooth harrows from \$20 to \$10; disk harrows from \$27 to \$18.

Six-foot twine-binder harvesters were sold to the farmer in 1880 for \$325, and for \$120 in 1900; and the "combined" harvester was sold for \$150 in 1860, as against \$65 in 1900. The price of corn knives declined from 75 cents in 1860 to 40 cents in 1900; of fanning mills from \$35 to \$15.

The decline in the price of mowers has been very marked. One establishment reports that prices declined from \$100 in 1860 to \$40 in 1900; another one that the decline was from \$160 to \$40 for the same years, and still another \$120 to \$45. The price of good walking plows diminished very largely from 1860 to 1900; one establishment reports a diminution from \$16.50 to \$4.50; another from \$6.50 to \$3; another one from \$10.50 to \$8.50; and in all cases reported the diminutions are very perceptible.

Sulky hay rakes that sold for \$35 in 1860 sold for \$14 in 1900, but in another case the price of \$20 did not change in the meantime, yet it should be understood in this instance that improvements in the mechanism may have been sufficient to maintain the price and at the same time cause the latter rake to be vastly superior to the former.

The farmer of 1900 was paying only a minority fraction of the price of 1860 for his reaper. One company reports the price for 1860 at \$150 and for 1900 at \$60; another \$125 for 1860 and \$40 for 1900; while still another reports \$200 for 1860 and \$60 for 1900.

Farm platform scales fitly belong to the long category of the table that is presented; scales of one description declined from \$150 in 1860 to \$50 in 1900. Then there are scythes, which have dropped from \$1 in 1880 to 60 cents in 1900; two-horse seeders from \$35 in 1880 to \$25 in 1900; cream separators of dairy size from \$125 in 1880 to \$100 in 1900.

Cornshellers have shared in the general decline of prices; one that cost \$10 in 1860 could have been bought for \$2.40 in 1900; another one declined from \$10 to \$6 from 1880 to 1900.

Bobsleighs worth \$34 in 1880 sold for \$26 in the manufacture of 1900; spades lost 25 per cent of their selling price from 1860 to 1900; and hay tedders of the value of \$70 in 1880 sold for \$35 in 1900.

Generally speaking, thrashers have not participated in the general decline of prices herein indicated, the reason being that their construction has become more expensive, the materials more nearly perfect, and the effectiveness of the machine of a much higher character.

Farm wagons that cost \$125 in 1860 and \$90 in 1880 cost \$57 in 1900; in the case of another establishment, wagons worth \$100 in 1860 and \$75 in 1880 were worth \$55 in 1900; and in still another case, wagons worth \$50 in 1860 and \$35 in 1880 had the price of \$22.50 in 1900. Steel windmills declined in price from \$50 in 1890 to \$25 in 1900; wooden windmills from \$30 in 1880 to \$25 in 1900.

With an endeavor to avoid being too prolix in the analysis of this table, it may be sufficient to say, finally, that the price of heavy wire fencing per mile in 1890 was \$320 and in 1900 \$176.

To the preceding statements, which are extracts from the table contained in this report, there are many exceptions, sometimes of a contrary nature; but it is believed that the general import of the table has been expressed in the extracts that are made. In offering this table to the public it is proper to repeat that its contents are of an exceptionally trustworthy character, within the limits of the explanations of the preceding pages.

Cash prices of agricultural implements and machines delivered f. o. b., including commissions and allowances to agents, but not including discount for cash within thirty days, on about July 1 of years mentioned.

BINDER TWINE (PER POUND).

Establishment No.	Description of manufactured article. (a)	1860.	1880.	1890.	1895.	1900.
17	.....	.....	.....	\$0.11	\$0.07	\$0.11½
126	.....	.....	.....	.....	.06	.09½
252	.....	.....	.....	.10½	.04½	.09
261	Pure manila .....	.....	.....	.14½	.07½	.13

CARRIAGES AND BUGGIES.

3	.....	.....	\$300.00	\$125.00	\$100.00	\$80.00
11	Top buggies. ....	.....	.....	50.00	40.00	46.00
14	.....	.....	175.00	150.00	125.00	125.00
27	Buggies .....	.....	100.00	60.00	50.00	45.00
33	Top buggies. ....	.....	.....	55.00	45.00	40.00
35	.....	.....	.....	55.00	50.00	50.00
37	.....	.....	115.00	110.00	105.00	100.00
48	Buggies .....	.....	.....	100.00	90.00	80.00
51	Buggies .....	.....	.....	85.00	75.00	75.00
52	"Trade" buggies .....	.....	.....	55.00	55.00	52.50
65	.....	.....	.....	40.00	38.00	38.50
66	.....	.....	90.00	60.00	50.00	50.00
68	.....	.....	165.00	85.00	65.00	60.00
69	.....	.....	.....	.....	40.00	40.00
75	.....	.....	.....	50.00	43.70	42.75
107	.....	\$200.00	125.00	100.00	85.00	100.00
121	.....	.....	.....	.....	76.00	81.00
123	Buggies .....	.....	.....	.....	46.00	53.00
127	Carriages	450.00	400.00	375.00	250.00	225.00
127	Buggies	325.00	275.00	175.00	150.00	125.00
128	.....	.....	.....	53.32	48.50	50.96
129	Top buggies. ....	.....	57.50	50.00	45.00	47.50
130	Buggies and phaetons .....	.....	.....	78.25	67.50	70.00
143	Buggies, piano box .....	.....	.....	60.00	50.00	50.00
144	Buggies .....	.....	.....	55.00	45.00	42.00
186	Top buggies.	90.00	60.00	47.50	39.00	43.00
187	.....	.....	110.00	95.00	90.00	75.00
189	A grade .....	.....	175.00	150.00	125.00	110.00
189	B grade .....	.....	90.00	70.00	60.00	50.00
198	Buggies .....	.....	.....	.....	52.50	55.00
223	Top buggies. ....	.....	65.00	55.00	42.50	47.50
254	.....	.....	.....	45.00	40.00	42.00
254	Surreys .....	.....	.....	80.00	75.00	70.00
3	Surreys .....	.....	400.00	175.00	150.00	93.00
11	Top surreys .....	.....	.....	110.00	85.00	95.00
14	Surreys .....	.....	225.00	200.00	150.00	160.00
27	Surreys .....	.....	150.00	100.00	90.00	75.00
33	Surreys .....	.....	.....	75.00	65.00	60.00
35	Surreys .....	.....	.....	100.00	90.00	85.00
37	Surreys .....	.....	110.00	100.00	90.00	95.00
48	Surreys .....	.....	.....	200.00	175.00	140.00
51	Surreys .....	.....	.....	150.00	125.00	125.00
52	Surreys .....	.....	.....	125.00	115.00	100.00
65	Surreys .....	.....	.....	65.00	57.00	60.00
66	Surreys .....	.....	200.00	150.00	125.00	100.00
68	Surreys .....	.....	225.00	150.00	110.00	85.00
69	Surreys .....	.....	.....	.....	87.00	65.00
75	Surreys .....	.....	.....	113.00	110.00	80.75
107	Surreys	225.00	200.00	150.00	140.00	150.00

a The general descriptive title applies in the absence of specific description.

Cash prices of agricultural implements and machines, etc.—Continued.

CARRIAGES AND BUGGIES—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
121	Surreys				\$90.00	\$99.00
123	Surreys				74.00	62.00
127	Surreys		\$200.00	\$175.00	175.00	150.00
129	Surreys, top		105.00	90.00	77.50	80.00
130	Surreys and carriages			130.00	126.25	106.50
143	Surreys, straight sill			125.00	85.00	85.00
144	Surreys			110.00	60.00	55.00
186	Surreys		85.00	70.00	65.00	67.50
188	Surreys		190.00	160.00	140.00	120.00
189	Surreys, A grade		225.00	200.00	175.00	140.00
189	Surreys, B grade		190.00	150.00	110.00	80.00
198	Surreys				95.00	97.50
223	Surreys		125.00	100.00	90.00	95.00

CARRIERS (HAY).

22	Hay				\$3.50	\$3.50
90	Hay				30.00	22.50
96	Hay			\$5.00		3.50
154	Hay		\$8.00	6.00	4.50	4.50
221	Hay	\$10.00	10.00	7.50	5.00	3.50
247	Hay		10.00	9.00	8.00	8.00
257	Hay				10.00	7.50

CARTS.

37	.....		\$25.00	\$18.00	\$15.00	\$10.00
158	Farm			32.00	30.00	30.00
216	Farm	\$28.00	30.00	26.00	24.00	26.00
250	1-horse, dump		35.00	30.00	27.00	27.00

CHURNS.

12	.....				\$1.67	\$1.95
173	Hand power, dairy			\$150.00	125.00	75.00
248		\$7.30	7.30	6.50	5.33

CONDENSERS.

251	Cotton gin, 60-saw		\$32.00	\$36.00	\$30.00	\$30.00
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CRADLES.

108	Grain		\$2.00	\$2.00	\$2.00	\$2.25
169	Grain, per dozen	\$48.00	42.00	34.50	25.50	33.00

CULTIVATORS.

8	.....		\$22.00			\$12.00
24	.....		26.00	\$22.50	\$21.50	23.00
30	.....		17.50	16.20	15.40	16.20
43	.....				25.00	20.00
70	.....		3.50	2.40	2.00	
71	Wheel				24.00	26.00
85	.....					4.80
87	.....	\$7.00	6.50	5.00	4.00	6.00
89	Hand			6.00	4.25	4.00
94	.....	35.00		30.00		25.00
96	.....			7.00		6.00
111	Iron frame			6.00	4.00	5.00
113	.....		3.50	3.25	3.00	2.50
115	.....				6.00	4.00
118	.....	6.50	5.50	4.50	3.00	2.80
141	.....			25.00	25.00	27.00

Cash prices of agricultural implements and machines, etc.—Continued.

CULTIVATORS—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
156	.....	.....	.....	\$28.00	\$26.00	\$28.00
170	.....	.....	\$8.00	7.00	7.00	.....
206	.....	.....	15.00	14.00	13.00	13.50
217	.....	.....	.....	10.00	7.50	.....
224	.....	.....	3.50	3.25	2.75	2.50
225	.....	.....	.....	.....	5.00	5.00
258	.....	.....	.....	.....	12.00	13.00
34	.....	.....	16.00	15.00	14.00	13.00
4	Walking, 2-horse	.....	20.00	16.00	14.00	13.00
25	Walking	.....	.....	27.00	23.00	20.00
122	Walking	.....	18.00	16.00	14.00	15.00
145	Walking, tongue	.....	18.05	14.75	14.25	15.20
25	Riding	.....	.....	35.00	30.00	28.00
122	Riding	.....	24.00	22.00	20.00	21.00
155	Riding, 2-horse	\$45.00	45.00	35.00	28.00	28.00
194	Riding, 4-shovel	.....	.....	.....	19.00	20.00
195	Riding	.....	25.00	23.00	21.00	18.00
156	With seeder attachments	.....	.....	43.00	39.00	42.00
170	With seeder attachments	.....	15.00	12.00	12.00	.....
241	Disk (wholesale price)	.....	18.00	16.00	14.00	16.00
4	Disk	.....	.....	30.00	28.00	26.00
24	Disk	.....	.....	.....	33.00	33.00
25	Disk	.....	.....	.....	38.00	35.00
85	Disk	.....	.....	.....	.....	19.00
119	Disk	.....	.....	30.00	28.00	25.00
145	Disk	.....	.....	.....	24.70	26.60
194	Disk, 16-inch disks	.....	.....	28.00	28.00	28.00
195	Disk	.....	.....	.....	25.00	20.00
206	Disk	.....	.....	.....	21.00	20.00
235	Shovels	4.00	3.75	3.75	3.25	3.50
113	Shovels	.....	3.25	3.00	2.00	2.25
145	Shovels	.....	1.00	.67	.67	.67
155	Shovels, per pound	.25	.25	.10	.08	.08
170	Shovels, per pound	.....	1.15	.12	.12	.08
195	Shovels	.....	1.13	1.13	1.13	1.13
206	Shovels	.....	1.13	1.00	.90	.90
170	Horse hoe	.....	12.00	11.25	10.25	6.00
73	Horse hoe, spring-tooth	.....	9.00	8.00	7.00	6.00
96	Horse hoe	.....	.....	4.00	.....	3.50
115	Horse hoe	.....	.....	.....	.....	4.00
122	Horse hoe	.....	5.00	4.00	3.00	3.50
153	Horse hoe	9.00	8.50	6.50	5.00	3.50
155	Horse hoe	.....	15.00	9.00	6.00	6.00
24	Beet, 2-row	.....	.....	.....	.....	18.00
170	Beet	.....	10.00	8.00	8.00	.....

CUTTERS.

39	Corn	.....	.....	.....	.....	\$525.00
208	Bone	.....	.....	\$18.40	\$18.40	18.40
36	Feed, hay, and ensilage	.....	.....	3.50	3.50	3.50
94	Feed, hay, and ensilage	\$12.00	.....	12.00	.....	10.00
96	Feed, hay, and ensilage	.....	.....	60.00	.....	50.00
136	Feed, hay, and ensilage	.....	\$17.50	13.50	12.50	11.00
151	Feed, hay, and ensilage	.....	58.50	54.00	49.50	54.00
159	Feed, hay, and ensilage	.....	8.75	4.50	2.75	2.00
165	Feed, hay, and ensilage	.....	3.00	2.75	2.00	1.75
167	Feed, hay, and ensilage	.....	.....	3.00	1.60	2.00
178	Feed, hay, and ensilage	.....	.....	2.50	1.65	2.00
181	Feed, hay, and ensilage, 12-inch	65.00	45.50	42.50	39.00	42.00
185	Feed, hay, and ensilage	.....	.....	85.00	70.00	80.00
212	Feed, hay, and ensilage	65.00	60.00	55.00	55.00	50.00
63	Vegetable and root	.....	.....	.....	2.50	2.25
96	Vegetable and root	.....	.....	10.00	.....	9.00
250	Root	.....	18.00	14.00	12.00	12.00
24	Stalk	.....	40.00	28.00	25.00	25.00
122	Stalk	.....	.....	.....	20.00	22.00
206	Stalk	.....	25.00	23.00	19.00	19.00

CUTTING NIPPERS.

250	Cheapest	.....	\$0.75	\$0.63	\$0.50	\$0.50
250	Best	.....	1.25	1.00	.75	.75

Cash prices of agricultural implements and machines, etc.—Continued.

DIGGERS.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
47	Potato					\$45.00
63	Potato			\$125.00	\$100.00	110.00
137	Potato			125.00	110.00	110.00
155	Potato, plain.....	\$18.00	\$20.00	15.00	12.00	10.00
170	Potato		20.00	20.00	20.00	17.50
197	Potato					20.00
219	Potato		28.00	25.00	24.00	24.00
256	Potato		12.00	10.00	10.00	10.00
259	Potato				5.00	5.00

DRILLS.

24	Beet.....					\$37.50
154	Beet.....				\$43.00	40.00
24	Corn, 1-horse.....			\$12.00	10.50	10.50
36	Corn			10.00	10.00	10.00
38	Corn, 1-horse.....		\$18.00	12.00	10.00	8.00
43	Corn				24.00	20.00
149	Corn		12.00	11.00	9.00	8.00
38	Corn, 2-horse.....		28.00	25.00	22.00	21.00
38	Fertilizer, 2-horse		75.00	65.00	60.00	60.00
88	Fertilizer (wholesale price).....		68.00	68.00	60.00	65.00
150	Fertilizer		90.00	70.00	65.00	70.00
28	Grain, 5-hoe.....			14.00	12.00	10.00
36	Grain			58.00	54.00	56.00
38	Wheat, 1-horse.....		18.00	15.00	12.00	10.00
38	2-horse, plain.....		50.00	40.00	35.00	35.00
176	Grain	\$65.00	85.00	80.00		
43	Grain				35.00	37.00
77	Grain		67.50	60.00	56.25	48.00
78	Grain, hoe.....		61.00	46.00	45.00	48.00
78	Grain, 2-hoe.....			72.00	61.00	62.50
96	Grain			90.00		75.00
99	Grain, 9-hoe.....			64.00	58.00	67.00
136	Grain		50.00	35.00	32.00	
149	Grain		50.00	40.00	30.00	30.00
150	Grain	90.00	70.00	52.00	48.00	50.00
154	Grain, plain hoe.....		57.00	50.00	46.00	47.00
154	Grain, fertilizer hoe.....		77.00	70.00	66.00	67.00
155	Grain, plain.....	65.00	75.00	60.00	50.00	50.00
1	8-disk, press.....			52.00	42.00	42.50
36	Disk					58.00
43	Disk					42.00
154	Disk, plain.....				53.00	52.00
154	Disk, fertilizer				73.00	72.00
155	Disk.....		85.00	70.00	60.00	60.00

ENGINES.

21	Portable, 12-horsepower		\$1,015.00	\$1,000.00	\$1,000.00	\$1,000.00
26	Portable, 6-horsepower, plain.....			800.00	800.00	750.00
26	Portable, 8-horsepower, plain.....			850.00	850.00	800.00
26	Portable, 10-horsepower, plain.....			1,000.00	900.00	850.00
32	Portable, 18-horsepower					675.00
74	Portable		1,250.00	1,225.00	1,150.00	1,125.00
95	Portable	\$900.00				750.00
97	Portable	1,000.00	1,000.00	1,000.00	850.00	850.00
105	Portable, 6 to 8 horsepower			375.00	350.00	375.00
114	Portable	950.00	600.00	500.00	450.00	600.00
133	Portable, 10-horsepower		900.00	900.00	800.00	750.00
134	Portable	1,350.00	1,300.00	1,015.00	1,000.00	1,015.00
155	Portable, 10-horsepower	1,200.00	1,200.00	700.00	600.00	600.00
266	Portable				850.00	
21	Traction, 12-horsepower		1,200.00	1,215.00	1,215.00	1,250.00
26	Traction, 6-horsepower, wood and coal burners			1,000.00	1,000.00	1,050.00
26	Traction, 8-horsepower, wood and coal burners			1,150.00	1,150.00	1,150.00
26	Traction, 10-horsepower, wood and coal burners			1,250.00	1,250.00	1,250.00

Cash prices of agricultural implements and machines, etc.—Continued.

ENGINES—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
26	Traction, 16-horsepower, straw burners			\$1,550.00	\$1,580.00	\$1,650.00
32	Traction, 16-horsepower					950.00
81	Traction, 12-horsepower			1,170.00	1,170.00	1,251.00
142	Traction			1,200.00	1,125.00	1,240.00

EVAPORATORS.

79	Sorghum sirup plants, complete, smallest			\$1,685.00		\$1,355.00
79	Sorghum sirup plants, complete, largest			2,676.00		2,455.00
106	Maple sugar				\$85.00	49.00
248	Sugar		\$45.00	40.00	35.00	35.00
257	Sugar			25.00	25.00	28.00

FEEDERS.

251	Cotton gin, 60-saw		\$32.00	\$36.00	\$30.00	\$50.00
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FERTILIZER DISTRIBUTERS.

36			\$18.00	\$17.00	\$16.00
170		\$18.00	18.00	18.00	16.00
205			6.00		4.00
243	(Wholesale price)	\$10.00	7.00	6.00	6.00	6.50
258	.....				8.00	8.00

FORKS.

22	Horse hay				\$0.75	\$0.85
87	Horse hay	\$5.00	\$3.50	\$1.50	1.25	1.00
96	Horse hay			1.00		.75
154	Horse hay		3.00	1.50	1.25	1.25
221	Horse hay	25.00	25.00	25.00	15.00	12.50
247	Horse hay, grappling		12.00	10.00	9.00	10.00

GINS.

213	Cotton, per saw	\$5.00	\$3.50	\$2.25	\$2.10	\$1.80
236	Cotton, 60-saw	133.50	136.00	130.00	120.00	90.00
236	Cotton, with feeder and condenser		216.00	180.00	180.00	150.00
240	Cotton, 60-saw (wholesale price)		144.00	136.00	117.00	108.00
251	Cotton, 60-saw		112.00	108.00	90.00	90.00

HARROWS AND PULVERIZERS.

22	.....				\$9.00	\$10.50
24	Harrows		\$13.00	\$8.00	8.00	8.30
29	Scotch harrows					3.25
70	.....		10.00	9.00	8.50	
113	.....		12.00	11.00	10.00	10.00
131	Pulverizers			27.50	24.00	24.00
147	.....			14.00	14.00	12.00
160	.....			18.00	15.00	12.00
170	.....		12.50	12.50	12.00	8.00
194	2-section			5.00	4.50	4.25
195	.....			12.00	10.00	9.00
196	Harrows			25.00	16.80	18.50
206	.....			10.00	9.00	8.50
219	.....			14.00	14.00	14.00
231	Harrows		15.00	12.00	9.50	10.00
243	(Wholesale price)	\$10.00	7.50	6.10	6.00	6.75
245	.....		20.00	25.00	15.00	17.00

Cash prices of agricultural implements and machines, etc.—Continued.

HARROWS AND PULVERIZERS—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
256	.....		\$12.00	\$11.00	\$10.00	\$10.00
73	Spring tooth, 16-tooth.....	\$25.00	22.00	16.00	12.00	7.00
87	Spring tooth.....		24.00	20.00	17.00	14.00
89	Spring tooth.....			16.00		11.00
96	Spring tooth.....			20.00		16.00
153	Spring tooth.....		16.00	14.00	12.00	10.00
155	Spring tooth, plain float.....		20.00	12.00	10.00	10.00
156	Spring tooth.....			13.00	12.00	10.50
24	Disk, 7-foot, 16-inch.....			35.00	28.00	27.00
87	Disk.....	40.00	30.00	25.00	20.00	20.00
103	Disk.....					24.00
119	Disk.....			24.00	22.00	20.00
135	Disk.....			24.00	18.00	17.00
145	Disk.....					21.85
149	Disk.....				20.00	18.00
153	Disk.....		27.00	24.00	21.00	18.00
154	Disk.....					35.00
155	Disk.....	45.00	40.00	30.00	20.00	20.00
166	Disk.....				28.00	25.00
194	Disk, 12 disks, 16-inch.....			25.00	22.00	20.00
194	Disk, 12 disks, 18-inch.....			26.00	24.00	25.00
195	Disk.....			27.00	25.00	22.00
241	Disk (wholesale price).....		30.00	20.00	18.00	20.00
250	Disk, cheapest.....		25.00	21.00	14.00	16.00
250	Disk, best.....		120.00	100.00	75.00	80.00
24	Spading.....					35.00
103	Spading.....				27.50	24.00
153	Spike.....		14.70	12.00	9.00	9.00

HARVESTERS.

71	Bean.....				\$10.00	\$11.00
17	Corn.....				125.00	125.00
119	Corn.....					125.00
146	Corn.....				140.00	140.00
217	Corn.....			\$20.00	20.00	22.50
6	Twine binders, 6-foot.....		\$325.00	140.00	125.00	120.00
13	Twine binders, 6-foot.....					130.00
17	Twine binders.....		300.00	150.00	125.00	125.00
99	Twine binders.....				95.00	105.00
109	Twine binders.....			120.00	110.00	110.00
119	Twine binders.....		175.00	135.00	125.00	125.00
132	Twine binders.....		300.00	150.00	125.00	125.00
146	Twine binders.....		175.00	160.00	150.00	140.00
152	Twine binders.....			108.75	92.00	100.00
160	Twine binders (price to agent).....			98.63	93.87	99.53
13	Combined, 10-foot.....					230.00
17	Combined.....		300.00	150.00	125.00	125.00
36	Combined.....			35.00	35.00	35.00
132	Combined.....	\$150.00	110.00	80.00	65.00	65.00
266	Combined.....				1,500.00	1,200.00
228	Combined (for Pacific coast).....		2,300.00	1,750.00	1,650.00	1,650.00
238	Combined (for Pacific coast).....			1,500.00	1,500.00	1,500.00
13	Headers, 10-foot.....			165.00	162.50	170.00
17	Headers.....					200.00
119	Headers.....		300.00	250.00	200.00	175.00
266	Headers.....				300.00	260.00
17	Rice.....				150.00	150.00

HILLERS.

170	Celery.....			\$12.00	\$12.00	.....
87	Potato.....		\$12.00	10.00	9.00	\$8.00
94	Potato.....			8.50	6.50	5.00
115	Potato.....				8.00	6.00
259	Potato.....				5.00	5.75
113	Potato.....			6.00	6.00	5.40

HOES.

87	\$0.50	\$0.50	\$0.40	\$0.35	\$0.40
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Cash prices of agricultural implements and machines, etc.—Continued.

HOOKS.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
232	Grass.....	\$3.25	\$2.00	\$1.62	\$1.62

HORSEPOWERS.

263	For grinding (2-horse).....	\$27.00	\$24.00	\$23.50
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HULLERS.

26	Clover, No. 1.....	\$470.00	\$470.00	\$475.00
26	Clover, No. 2.....	460.00	460.00	465.00
95	Clover.....	\$350.00
117	Clover.....	\$125.00	90.00	80.00	80.00	80.00

INCUBATORS.

16	\$25.00	\$21.00	\$19.50
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KNIVES.

71	Bean harvester.....	\$2.50	\$3.00
87	Corn.....	\$0.75	\$0.60	\$0.50	.35	.40
180	Corn, per dozen.....	1.50	1.25	1.25	1.00
184	Corn, per dozen.....	.....	.....	18.00	15.00	12.00
242	Corn.....	.....	2.25	2.00	1.50	1.25
282	Hay.....	.....	.....	.....	5.00	5.00

MARKERS AND FURROWERS.

111	.....	.....	\$10.00	\$8.00	.....	.....
199	.....	.....	12.00	10.00	\$9.00	\$8.00
219	.....	.....	9.50	9.00	8.50	7.50

MILLS.

134	Cane.....	\$75.00	\$65.00	\$60.00	\$50.00	\$60.00
50	Cider presses.....	.....	350.00	350.00	350.00	400.00
136	Cider mills and presses.....	.....	19.00	17.00	15.00	14.00
154	Cider.....	.....	25.00	21.00	20.00	21.00
155	Handmill, 2-curb.....	40.00	40.00	20.00	17.00	17.50
212	Cider.....	60.00	60.00	50.00	45.00	35.00
250	Cider, small.....	.....	12.00	10.00	8.00	8.00
250	Cider, best.....	.....	125.00	110.00	96.00	96.00
80	Fanning.....	25.00	33.00	29.00	29.00	29.00
83	Fanning.....	.....	35.00	30.00	25.00	20.00
84	Fanning.....	.....	.....	14.00	14.00	14.00
86	Fanning.....	.....	30.00	30.00	25.00	22.50
87	Fanning.....	20.00	.....	.....	.....	.....
117	Fanning.....	.....	25.00	20.00	20.00	20.00
148	Fanning.....	.....	30.00	30.00	30.00	20.00
179	Fanning.....	35.00	20.00	18.00	16.00	15.00
183	Fanning.....	.....	12.50	10.75	9.50	10.50
54	Feed.....	.....	.....	.....	.....	20.00
86	Horse-powers for grinding, etc.....	.....	170.00	150.00	130.00	110.00
117	Horse-powers for grinding, etc.....	140.00	125.00	100.00	100.00	110.00
136	Horse-powers for grinding, etc.....	.....	.....	37.50	32.50	30.00
181	Horse-powers for grinding, etc., 4-horse..	60.00	42.50	40.00	39.00	35.00
185	Horse-powers for grinding, etc.....	.....	.....	55.00	45.00	52.00
207	Horse-powers for grinding, etc.....	185.00	160.00	160.00	150.00	140.00

Cash prices of agricultural implements and machines, etc.—Continued.

MILLS—Continued.

Estab- lish- ment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
32	Portable saw.....				\$275.00	
97	Portable saw.....	\$350.00	\$350.00	\$350.00	300.00	\$300.00
131	Portable saw.....	450.00	404.00	450.00	300.00	360.00
155	Portable saw.....	800.00	800.00	600.00	400.00	400.00
157	Portable saw.....		400.00	350.00	300.00	250.00
229	Portable saw.....		185.00	170.00	160.00	160.00
244	Portable saw.....		350.00		175.00	210.00

MOWERS.

6	4½-foot		\$80.00	\$50.00	\$45.00	\$43.00
13	5-foot				45.00	42.00
17	.....		80.00	50.00	45.00	45.00
87	.....	\$100.00	65.00	60.00	35.00	40.00
96	.....			50.00		40.00
99	.....			30.00	33.00	37.00
109	.....	120.00	75.00	50.00	45.00	45.00
115	.....		50.00	40.00	38.00	35.00
119	.....	160.00	100.00	50.00	45.00	40.00
132	.....	100.00	75.00	50.00	40.00	40.00
146	.....	125.00	75.00	50.00	47.50	45.00
152	.....		56.25	41.25	35.00	39.00
166	.....				45.00	45.00
194	4½-foot		40.00	35.00	32.00	35.00
241	(Wholesale price).....	100.00	52.00	40.00	35.00	38.00
250	2-horse		125.00	50.00	36.00	38.00

PICKERS.

115	Bean.....					\$25.00
267	.....				\$15.00	10.00

PLANTERS.

258	Broom corn.....				\$33.00	\$34.50
115	Bean.....					35.00
205	Bean and pea.....			\$6.00		5.00
24	Beet					37.50
170	Beet			12.00	9.00	9.00
24	Cotton			11.00	10.00	10.00
122	Cotton				7.00	7.75
155	Cotton		\$10.00	5.00	4.00	4.00
225	Cotton			5.00	4.00	2.50
40	Hand corn.....			1.25		1.00
72	Hand corn.....			1.75	1.50	1.17
258	Hand corn.....				9.00	9.00
87	Hand corn.....	\$1.25	1.25	1.00	.80	1.00
96	Hand corn.....			2.00		1.50
116	Hand corn.....		15.00	9.00	9.00	9.00
136	Hand corn.....		6.50	5.00	4.50	4.00
178	Hand corn.....	32.00	25.00	12.00	11.00	12.00
180	Hand corn, per dozen.....		6.00	5.25	5.25	5.00
253	Hand corn, per dozen.....		18.00	12.00	9.00	7.75
257	Corn and bean.....				35.00	40.00
24	Potato					48.00
47	Potato					25.00
87	Potato					35.00
115	Potato					35.00
182	Potato					25.00
19	Corn, 2-row.....				40.00	35.00
24	Corn, and drill.....		63.00	46.00	41.00	40.00
36	Corn				32.00	30.00
62	Corn, wireless.....					37.00
87	Corn					22.00
149	Corn		45.00	35.00	30.00	27.00
155	Corn, single row.....	20.00	20.00	16.00	14.00	14.00
258	Corn				33.00	34.50
195	Corn			36.00	35.00	31.00
205	Corn			6.00		5.00
225	Corn		25.00	16.00	10.00	7.50

Cash prices of agricultural implements and machines, etc.—Continued.

PLOWS.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
8	Walking	\$17.00				\$12.00
24	Walking		\$9.17	\$8.93	\$8.25	8.25
30	Walking, 1-horse		5.20	4.80	4.55	4.80
31	Walking, 1-horse	7.00	6.00	4.00	4.00	3.50
34	Walking, steel	9.50	10.50	10.00	10.00	10.00
67	Walking		15.00	15.00	14.00	15.00
70	Walking		14.00	12.00	11.00	.....
71	Walking				10.00	11.00
87	Walking	8.00	8.00	7.00	6.00	6.00
89	Walking		11.20	10.00	9.10	8.10
93	Walking				8.67	9.12
96	Walking			14.00		12.00
99	Walking			9.75	9.50	9.50
103	Walking, full trimmed	15.00	15.00	15.00	13.00	14.00
111	Walking		12.00	9.00	8.00	8.00
113	Walking		10.00	8.00	7.00	6.50
118	Walking	16.50	9.00	5.75	4.50	4.50
139	Walking			5.94	5.94	7.02
147	Walking		20.00	15.00	14.00	15.00
153	Walking, cast	13.50				.....
153	Walking, all steel	16.50	15.00	12.60	11.20	10.67
155	Walking, medium cast	6.60	5.00	4.00	3.00	3.00
164	Walking			14.00	12.00	12.00
167	Walking			7.00	4.00	5.00
171	Walking	23.00	17.25	13.80	11.50	12.65
172	Walking	10.50	10.00	9.00	8.50	8.50
175	Walking			11.25	11.00	12.00
165	Walking		14.00	12.00	10.50	8.00
181	Walking			6.50	4.90	6.00
178	Walking		13.50	11.50	11.00	10.00
206	Walking		12.60	11.55	10.80	9.90
220	Walking	12.00	14.00	13.00	13.00	14.00
222	Walking	11.50	7.35	5.94	5.70	4.75
227	Walking	18.00	16.00	15.00	12.00	12.75
235	Walking	8.00	7.50	7.00	6.25	7.00
239	Walking			20.00		15.00
243	Walking, 1-horse (wholesale price)	7.50	3.00	1.40	1.40	1.60
256	Walking			2.75	2.25	2.50
250	Common cast, 2-horse		4.00	3.00	2.75	2.75
250	Common cast, 3-horse		10.00	6.00	4.25	4.25
153	Chilled		12.00	8.40	7.00	6.66
30	Subsoil		8.75	8.10	7.70	8.10
87	Subsoil	6.00	6.00	6.00	5.00	5.00
103	Subsoil		10.00	10.00	10.00	10.00
113	Subsoil		10.00	7.00	7.50	7.00
155	Subsoil	8.60	7.00	6.00	5.00	5.00
243	Subsoil, 2-horse (wholesale price)	12.00	6.00	2.80	2.80	3.20
4	Gang	60.00	60.00	55.00	50.00	48.00
24	Gang			43.50	40.00	46.00
34	Gang			50.00	50.00	43.00
124	Gang		25.00	16.00	11.00	15.00
153	Gang		75.00	65.00	60.00	55.00
155	Gang		75.00	50.00	38.00	35.00
194	Gang				46.00	50.00
195	Gang		55.00	55.00	50.00	47.00
199	Gang		25.00	20.00	15.00	12.50
219	Gang	18.00	25.00	14.00	12.50	12.00
266	Gang				36.00	26.00
250	Gang and disk, per gang		8.00	7.00	6.00	6.50
30	Breaking		8.75	8.10	7.70	8.10
31	Breaking	10.00	11.00	10.00	9.00	8.00
87	Breaking	15.00	15.00	15.00	14.00	12.00
168	Breaking		4.50	2.50	2.00	1.75
206	Breaking		10.00	9.00	8.50	7.00
209	Breaking					10.00
219	Breaking	8.50	8.00	7.50	7.50	7.50
239	Breaking			25.00		20.00
49	Disk or rotary, single disk		50.00	50.00	50.00	50.00
49	Disk, double		60.00	60.00	60.00	60.00
49	Disk, 3-disk		75.00	70.00	70.00	75.00
202	Disk or rotary				45.00	40.00
226	Disk, 2-disk				48.00	54.00
226	Disk, 4-disk				83.20	93.60
226	Disk, 5-disk				99.20	111.60
226	Disk, 6-disk				112.00	126.00
226	Disk, 10-disk				166.40	187.20
250	Disk, solid, cheapest		20.00	15.00	12.00	15.00

Cash prices of agricultural implements and machines, etc.—Continued.

PLOWs—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
250	Disk, solid, best		\$100.00	\$75.00	\$60.00	\$75.00
4	Sulky, riding, or wheel			40.00	35.00	32.00
24	Sulky		39.00	34.50	33.00	35.00
30	Sulky, riding, or wheel		32.00	30.00	29.00	30.00
34	Sulky, riding, or wheel		36.00	34.00	32.00	30.00
89	Sulky, riding, or wheel			40.00	37.50	36.00
103	Sulky, riding, or wheel			45.00	36.00	35.00
145	Sulky, riding, or wheel		39.90			28.50
166	Sulky, riding, or wheel			50.00	40.00	35.00
194	Sulky, riding, or wheel				32.00	36.00
195	Sulky, riding, or wheel		40.00	35.00	33.00	28.00
206	Sulky, riding, or wheel		35.00	34.00	30.00	28.00
30	Shovel		2.10	2.00	1.90	2.10
31	Shovel	\$5.00	4.00	3.00	2.50	2.50
34	Shovel	4.50	4.00	3.00	2.00	1.75
87	Shovel	5.00	4.00	2.50	2.50	3.00
89	Shovel			2.50	2.00	1.70
94	Shovel	5.00		4.00		2.50
96	Shovel			5.00		4.00
99	Shovel			3.00	2.85	2.85
111	Shovel		5.00			
113	Shovel		3.50	3.00	1.75	2.00
122	Shovel		2.50	2.00	1.60	1.75
141	Shovel			1.25	1.50	1.35
147	Shovel		3.50	3.50	3.00	3.25
155	Shovel, double	5.00	6.00	4.00	3.00	3.00
256	Shovel		4.00	3.75	3.50	3.50
257	Shovel				3.50	3.50
87	Swivel, reversible, and side-hill walking ..	12.00	10.00	10.00	8.00	9.00
89	Swivel, reversible, and side-hill walking ..		12.60	10.67	9.75	8.40
96	Swivel, reversible, and side-hill walking ..			15.00		12.00
103	Swivel, reversible, and side-hill walking, full trimmed ..					
111	Side-hill walking		7.00	6.00	6.00	6.00
167	Swivel, reversible, and side-hill walking ..			7.00	4.00	5.00
235	Swivel, reversible, and side-hill walking ..	8.00	7.00	6.50	6.00	7.00

POST-HOLE DIGGERS.

40				\$2.50		\$2.00
122	(Per dozen)				\$5.00	5.50
197					7.00	5.50

PRESSES.

13	Hay and baling, horsepower					\$195.00
16	Hay and baling	\$250.00	\$250.00	\$200.00	\$180.00	165.00
104	Hay and baling		200.00	180.00	160.00	140.00
246	Hay and baling, wooden					125.00
246	Hay, steel					175.00
260	Hay				550.00	600.00
136	Wine		10.00	8.50	8.00	7.50

PUMPS, TANKS, AND SPRAY PUMPS.

15	Wooden pumps			\$2.36	\$2.03	\$2.66
57	Iron pumps			3.25	2.50	2.75
58	Tank pumps				4.75	4.50
60	Pumps		\$4.00			2.50
73	Wooden pumps	\$10.00	8.00	7.00	6.00	4.00
92		30.00	18.00	15.00	15.00	15.00
106				10.00	7.50	8.75
166	Wooden pumps	10.00	7.00	6.00	5.00	8.00
192			4.00	3.20	2.40	2.30
258					8.50	8.50

Cash prices of agricultural implements and machines, etc.—Continued.

RACKS.

Estab- lish- ment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
113	Hay.....		\$7.50	\$7.00	\$5.50	\$6.00
113	Tobacco		6.00	5.50	5.00	4.50

RAKES.

4	Sulky hay.....	\$35.00	\$25.00	\$20.00	\$16.00	\$14.00
13	Sulky hay, 10-foot hand dump.....				21.50	22.00
13	Sulky hay, 10-foot self dump.....				24.00	25.00
24	Sulky hay.....			22.00	21.00	20.00
29	Revolving hay.....			2.50	2.25	2.30
87	Sulky hay.....	20.00				20.00
91	Sulky hay.....		23.00	19.00	16.00	18.00
96	Sulky hay.....			20.00		18.00
99	Sulky hay.....			16.50	15.00	17.00
112	Sulky hay.....		28.00	24.00	20.00	24.00
114	Sulky hay.....		21.00	18.00	17.00	15.00
119	Sulky hay.....		25.00	22.00	20.00	20.00
135	Sulky hay.....			17.00	17.00	16.00
136	Sulky hay.....			15.00	13.00	12.00
145	Sulky hay.....		18.05	14.25	13.30	14.25
149	Sulky hay.....		30.00	18.00	15.50	14.50
156	Sulky hay.....		22.00	18.00	16.00	15.50
157	Sulky hay.....	35.00	20.00	17.00	15.00	14.00
176	Sulky hay.....	35.00	38.00	30.00		
195	Sulky hay.....			21.00	20.00	18.00
250	Horse		40.00	30.00	18.00	18.00
231	Sweep hay.....		20.00	18.00	17.00	17.00
211	Sweep hay.....		20.00	20.00	18.00	17.00

REAPERS.

6	.....			\$70.00	\$68.00	\$65.00
17	.....		\$150.00	75.00	65.00	65.00
87	.....	\$150.00	75.00	65.00	60.00	60.00
109	.....		100.00	75.00	60.00	60.00
115	.....	125.00	60.00	50.00	45.00	40.00
119	.....	200.00	100.00	60.00	60.00	60.00
132	.....	140.00	90.00	70.00	55.00	55.00
152	.....		101.25	60.00	50.00	55.00

ROAD MACHINES AND GRADERS.

44	.....	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
45	.....		225.00	225.00		225.00
85	.....			250.00	250.00	250.00
102	.....					35.00
163	.....			250.00	235.00	260.00
265	.....		110.00	110.00	110.00	110.00

ROLLERS.

71	Land or field, cast iron				\$24.00	\$27.00
86	Land or field.....			\$27.00	25.00	22.50
88	Land or field.....		\$20.00	18.00	16.00	18.00
94	Land or field.....	\$35.00		30.00		25.00
96	Land or field.....			22.00		20.00
98	Land or field.....			25.00	22.00	20.00
99	Land or field.....			18.50	17.00	16.00
101	Land or field.....				20.00	21.00
111	Land or field.....		40.00	35.00	28.00	30.00
113	Land or field.....		17.00	17.00	16.00	12.50
115	Land or field.....					15.00
131	Land or field.....			22.00	16.00	18.00
157	Land or field.....		27.00	20.00	17.00	13.00
165	Land or field.....		35.00	30.00	26.00	23.00
167	Land or field.....			22.00	16.00	18.00
178	Land or field.....			22.00	12.50	15.00
195	Land or field.....			20.00	18.00	16.00
196	Land or field, steel.....			35.00	25.00	28.00
235	Land or field.....	35.00	35.00	30.00	25.00	25.00

Cash prices of agricultural implements and machines, etc.—Continued.

SCALES.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
54	.....	.....	.....	.....	.....	\$30.00
60	.....	.....	.....	\$40.00	.....	30.00
61	4-ton, 8 by 15.....	.....	.....	.....	\$50.00	50.00
177	400-pound, platform.....	.....	.....	.....	15.00	15.00
177	Wagon.....	.....	.....	.....	125.00	125.00
190	.....	\$150.00	\$105.00	65.00	55.00	50.00
230	.....	141.42	101.18	72.08	74.84	66.18
237	.....	145.00	94.25	87.00	79.75	72.50

SCYTHES.

87	.....	\$1.00	\$0.80	\$0.75	\$0.50	\$0.60
232	.....	.....	7.00	6.00	5.00	7.50

SEEDERS (BEET).

24	.....	.....	.....	.....	.....	\$37.50
170	.....	.....	\$12.00	\$9.00	\$9.00	.....

SEEDERS AND SOWERS.

24	.....	.....	.....	\$19.00	\$17.00	\$17.00
36	.....	.....	.....	16.00	15.50	15.50
38	Seeders, 2-horse.....	.....	\$35.00	30.00	27.00	25.00
78	Seeders, with cultivators.....	\$53.00	43.00	38.00	34.00	35.00
78	Sowers.....	.....	31.50	26.00	22.00	22.00
114	.....	30.00	24.00	21.00	20.00	19.00
149	.....	.....	.....	33.00	30.00	28.00
154	Seeders, 12-bar.....	.....	43.00	38.00	36.00	37.00
154	Sowers, 11-foot.....	.....	30.00	26.00	23.00	25.00
170	.....	.....	12.00	9.00	9.00	7.00
197	.....	.....	.....	8.50	7.50	6.00
250	Seeders, gang disk, per gang.....	.....	1.50	1.25	1.00	1.10

SEPARATORS.

9	Cream.....	.....	.....	.....	\$125.00	\$125.00
110	Cream, dairy size.....	.....	\$125.00	\$125.00	125.00	100.00
120	Cream.....	.....	.....	.....	100.00	70.00
218	Cream.....	.....	.....	150.00	125.00	85.00
248	Cream.....	.....	.....	.....	100.00	80.00

SHELLERS.

87	Corn.....	\$8.00	\$7.00	\$6.00	\$5.50	\$6.00
96	Corn.....	.....	.....	7.00	.....	6.00
118	Corn.....	10.00	6.00	3.50	3.00	2.40
155	Corn, hand, double spout.....	22.00	22.00	18.00	15.00	15.00
167	Corn.....	.....	.....	.....	6.00	4.50
181	Corn.....	.....	.....	7.00	6.00	5.00
215	Corn, hand.....	.....	.....	2.75	2.50	2.25
250	Corn.....	.....	10.00	7.00	6.00	6.00
263	Corn, double spout.....	.....	.....	16.00	14.00	14.00

SLEIGHS.

14	Bob.....	.....	\$25.00	\$20.00	\$18.00	\$18.00
20	Bob.....	\$40.00	25.00	14.00	14.00	15.00
37	Bob.....	.....	18.00	15.00	13.00	15.00
55	Bob.....	.....	.....	.....	12.00	14.00
67	Bob.....	.....	34.00	30.00	26.00	26.00
71	Bob.....	.....	.....	.....	22.00	25.00
98	Bob.....	35.00	30.00	28.00	26.00	25.00
113	Bob.....	.....	22.00	20.00	19.00	18.00
158	Bob.....	.....	.....	16.00	14.00	14.50

Cash prices of agricultural implements and machines, etc.—Continued.

SLEIGHS—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
165	Bob		\$85.00	\$82.50	\$30.00	\$28.00
187	Bob		20.00	16.00	14.00	12.00
35	Light			16.00	14.00	13.50
37	Light		25.00	23.00	23.00	25.00
69	Light				16.00	16.00
70	Light		33.00	27.00	22.00	
107	Light cutters	\$125.00	75.00	50.00	40.00	50.00
121	Light				23.00	25.00
158	Light			12.00	12.00	12.00
187	Light		19.00	16.00	15.00	13.00

SORTERS.

174	Potato				\$20.00	\$10.00
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SPADES.

87	\$1.00	\$0.75	\$0.75	\$0.60	\$0.75
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SPRAYERS.

219				\$45.00	\$55.00
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STACKERS.

13	Hay, one kind			\$65.00	\$37.50	\$55.00
13	Hay, another kind				47.50	45.50
211	Hay		\$55.00	55.00	45.00	40.00
221	Hay	\$125.00	125.00	100.00	100.00	85.00
231	Hay			40.00	38.00	37.00

STUMP PULLERS.

5	.....			\$135.00	\$135.00	\$120.00
54	.....				54.00	66.50
82	.....			70.00	60.00	50.00
155	.....		\$80.00	60.00	50.00	45.00
165	.....		40.00	35.00	32.50	30.00
191	.....	\$125.00	80.00	55.00	40.00	28.00
262	(F. o. b. to purchaser, medium)					125.00

TEDDERS.

87	.....	\$25.00				\$30.00
96	.....			\$40.00		35.00
119	.....			\$35.00	\$35.00	35.00
135	.....			25.00	21.00	25.00
136	.....			27.00	23.00	21.00
149	.....			25.00	23.00	24.00
250	.....		\$70.00	50.00	35.00	35.00

THRASHERS.

21	.....		\$410.00	\$415.00	\$415.00	\$420.00
26	28 by 40			420.00	420.00	430.00
26	31 by 49			440.00	440.00	450.00
26	36 by 54			490.00	490.00	515.00
32	.....					575.00
74	.....	\$500.00	475.00	450.00	425.00	400.00
81	.....			427.50	427.50	445.50
85	.....					160.00
86	.....		220.00	180.00	170.00	159.00

Cash prices of agricultural implements and machines, etc.—Continued.

THRASHERS—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
95	.....	\$450.00	\$450.00	.....	.....	\$450.00
97	.....	450.00	450.00	.....	.....	450.00
105	.....	.....	.....	400.00	350.00	375.00
117	.....	225.00	175.00	160.00	150.00	165.00
133	32-inch cylinder	475.00	460.00	450.00	425.00	425.00
142	.....	.....	.....	375.00	338.00	360.00
155	With separators	400.00	450.00	350.00	300.00	300.00
161	With separators .....	.....	.....	.....	.....	160.00
172	.....	.....	125.00	110.00	100.00	85.00
176	.....	.....	225.00	200.00	165.00	135.00
207	.....	125.00	130.00	130.00	130.00	130.00
233	Medium size, 3,600 pounds	400.00	375.00	350.00	350.00	365.00
256	Bean and pea .....	.....	.....	.....	10.00	11.50
234	Bean and pea .....	.....	.....	.....	33.25	23.75
21	Sweep horsepowers .....	.....	220.00	210.00	200.00	200.00
74	Sweep horsepowers	240.00	225.00	200.00	180.00	150.00
81	Sweep horsepowers, 12-horse .....	.....	.....	216.00	207.00	211.50
95	Sweep horsepowers	150.00	150.00	.....	.....	.....
155	Sweep horsepowers, 6-horse	80.00	90.00	65.00	55.00	55.00
161	Sweep horsepowers .....	.....	.....	.....	.....	85.00
105	Tread horsepowers .....	.....	135.00	125.00	100.00	115.00
181	Sweep horsepowers .....	.....	175.00	150.00	120.00	100.00

TRUCKS.

250	Medium size, heavy .....	.....	\$10.00	\$7.50	\$5.75	\$5.75
250	Light size, heavy .....	.....	5.00	4.50	4.00	4.00

WAGON JACKS.

113	.....	.....	\$0.75	\$0.70	\$0.50	\$0.50
197	Cheapest .....	.....	.....	.....	1.00	1.00
197	Best .....	.....	.....	.....	3.00	3.00
199	Wooden frames .....	.....	.....	.90	.80	.75
219	.....	.....	.....	.75	.75	.50
267	.....	.....	.....	.....	.25	.25

WAGONS.

10	Farm .....	.....	\$63.80	\$52.80	\$52.80	\$57.20
14	Farm	\$120.00	70.00	60.00	52.50	60.00
20	Farm	125.00	90.00	52.00	50.00	57.00
37	Farm .....	.....	85.00	70.00	50.00	55.00
41	Farm .....	.....	90.00	75.00	65.00	70.00
55	Farm .....	.....	.....	.....	47.50	51.00
56	Farm	90.00	75.00	70.00	60.00	55.00
59	Farm	130.00	70.00	48.00	46.00	52.00
64	Farm	60.00	65.00	60.00	50.00	50.00
75	Farm .....	.....	52.25	42.75	40.85	45.60
76	Farm .....	.....	50.00	50.00	48.50	51.00
96	Farm .....	.....	.....	55.00	.....	45.00
107	Farm	125.00	95.00	80.00	75.00	85.00
122	Farm .....	.....	55.00	52.00	49.00	52.00
158	Farm .....	.....	.....	52.00	48.00	52.00
159	Farm	150.00	80.00	75.00	70.00	75.00
187	Farm .....	.....	65.00	60.00	52.00	45.00
201	Farm .....	.....	58.50	50.00	47.50	42.00
210	Farm .....	.....	70.00	60.00	57.00	64.50
214	Farm .....	.....	75.00	70.00	67.50	67.50
216	Farm	55.00	58.00	50.00	45.00	49.00
243	Farm	100.00	75.00	50.00	50.00	55.00
249	Farm .....	.....	50.00	40.00	39.00	44.00
255	Farm .....	.....	.....	.....	.....	58.00
14	Road .....	.....	.....	.....	65.00	75.00
32	Road .....	.....	.....	30.00	25.00	20.00
35	Road .....	.....	.....	39.00	35.00	34.00
36	Road .....	.....	.....	32.00	30.00	28.00
37	Road .....	.....	35.00	25.00	22.00	24.00
65	Road .....	.....	.....	30.00	24.00	25.00
66	Road .....	.....	50.00	40.00	35.00	30.00
68	Road .....	.....	.....	45.00	35.00	30.00
69	Road .....	.....	.....	.....	30.00	28.00

Cash prices of agricultural implements and machines, etc.—Continued.

WAGONS—Continued.

Establishment No.	Description of manufactured article.	1860.	1880.	1890.	1895.	1900.
123	Road.....				\$27.00	\$32.00
143	Road.....			\$57.00	47.00	47.00
162	Road.....			47.50	47.50	50.00
186	Road.....	\$50.00	\$35.00	27.50	21.50	22.50
187	Road.....			50.00	40.00	32.00
189	Road.....		90.00	50.00	37.00	28.00
198	Road.....				33.00	33.50
254	Road.....			28.00	26.00	27.00
214	Road.....		75.00	70.00	67.50	67.50
3	Spring.....		130.00	70.00	60.00	55.00
11	Spring.....			35.00	25.00	30.00
14	Spring.....		125.00	100.00	85.00	90.00
33	Spring.....			43.00	35.00	30.00
36	Spring.....			38.00	36.00	36.00
37	Spring.....		65.00	60.00	50.00	55.00
55	Spring.....				45.00	52.00
65	Spring.....			45.00	40.00	40.00
254	Spring.....			35.00	30.00	32.00
66	Spring.....		75.00	55.00	50.00	40.00
69	Spring.....				45.00	45.00
75	Spring.....		45.00	40.85	40.85	38.00
107	Spring.....	135.00	100.00	85.00	75.00	85.00
143	Spring.....			70.00	55.00	55.00
186	Spring.....	95.00	82.50	52.50	47.50	50.00
187	Spring.....		75.00	60.00	55.00	48.00
189	Spring.....		90.00	67.00	54.00	48.00
198	Spring.....				52.50	57.50
223	Spring.....		70.00	60.00	50.00	55.00

WEEDERS.

43	8-foot.....					\$7.00
43	12-foot riding.....					20.00
63	3 sections, 22-foot.....					10.00
71					\$8.00	7.00
87		\$7.00				6.00
103					10.00	8.00
125	Hand, per dozen.....					3.25
155				\$13.00	12.00	10.00
200				16.50	12.00	8.00

WEIGHERS AND GRAIN ELEVATORS.

19					\$85.00	\$65.00
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WINDMILLS.

2	Steel.....			\$50.00	\$25.00	\$25.00
7					16.00	18.00
18	10-foot (wholesale price).....	\$48.00	35.00		28.00	25.00
23		18.00	16.00		16.00	14.00
42	Wooden.....		27.00		22.50	24.00
46		40.00	34.44		28.88	22.22
53		90.00	60.00		50.00	40.00
58	Steel, 8-foot.....				20.00	18.00
60			28.00			18.00
70					60.00	40.00
140	8-foot.....			30.00	28.00	30.00
166	10-foot, with tower.....	80.00	65.00		60.00	55.00
192		33.00	30.00		27.00	24.40
193		37.50	35.00		30.00	25.00
196	Wooden.....	30.00	28.00		23.00	25.00
203			60.00			38.00
204			35.00		27.50	32.50
263	8-foot.....			33.00	22.00	24.00
264			45.00	37.50	32.50	27.50

WIRE FENCING.

138	Heavy, per mile.....			\$320.00	\$240.00	\$176.00
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EXTRACTS FROM THE RETURNS OF MANUFACTURERS.

The returns sent to this office by the manufacturers of agricultural implements and machinery contain many expressions of opinion with regard to the course of prices and the reasons therefor, and to other matters pertaining to the industry. From these returns extracts are herewith presented for the purpose of throwing light upon the business from economic and industrial points of view.

Buggies.—We are getting now just about the same prices that we did ten years ago, a trifle more than we did five years ago, but the vehicles are costing us more than they did in either of the above years. The demands of the trade are becoming more critical, and we have to give more for the money.

Buggies.—We are building a better buggy to-day for \$125 than was built in 1860 for \$250 to \$300, and other vehicles in proportion.

Carriages.—The 1900 average is about 15 per cent higher than in 1899, in consequence of the unprecedented advance in prices of steel and iron.

Carriages.—On account of the combination of brains, energy, and capital, steel manufacturers have enabled us to produce a better article at a less price than at any former period. We might also add that improved machinery has been and is a factor in producing the best results. During the fall of 1899 there was an advance in the price of implements, owing to an advance in all kinds of raw material, but on the fall in the price of material, which occurred about May or June of 1900, the price of implements was lowered correspondingly, so that the price named for 1900 is the present (October 22, 1900) prevailing price, and, we think, more correctly represents the situation.

Cotton bale ties.—Wire bale ties were not in use to any extent in 1860. Wooden hoops were chiefly used and some rope or twine, and there was no general price list until the introduction of wire ties or bands, which were imported, and cost in 1870 about 3 cents per band, but gradually became cheaper until just before the recent boom.

Cotton gins.—Feeders and condensers were not generally used in conjunction with cotton gins until about 1880. These attachments are nowadays almost universally used with the gins. The gin now improved is substantially the same as the one made in 1880, although there are a few changes and improvements which have suggested themselves from time to time. It should be noted that the price of the gin with feeder and condenser complete is only a trifle different from the price of the gin in 1860.

Fanning mills.—The country now demands practical, ingenious machinery for cleaning grain, as it is mixed very badly with deleterious seeds. Therefore, in order to make machinery to cope with the conditions which now exist, it is necessary for it to cost more money than formerly. Fanning mills are now put upon the market all the

way from \$8 up. With the improved machinery that I have in my factory I can, if I so desire, manufacture a fanning mill which will be cheaper than any fanning mill now upon the market; but it would be a fanning mill only in name, and could not cope with the conditions. Therefore it is hard for me to make you a schedule of prices. But I will say that no fanning mill can be manufactured, and properly manufactured and equipped, for less than \$22, wholesale.

Implements.—Our prices have remained the same, but we have made many valuable and extensive improvements. Our discounts to the trade have been increased but the retail price has not changed. We have also introduced smaller types of the same machine that do very good work at greatly reduced cost. Our various grades of machines sell for from \$6 to \$15, while previous to 1895 the cheapest machines we made sold for \$16. We have thus placed our machines within reach of the masses.

Implements.—Our prices in 1900 are about the same as they were in 1895. The usual decline did not take place, for the reason that materials used up in 1900 goods were bought at boom prices, while those in 1895 were purchased at low prices. Our profit rests simply on larger sales and better facilities for manufacturing. You will notice a small-sized [machine] which we sold at \$75 cash in 1880 that now sells at \$50, and a very much better article. There has been a marked decline in prices since 1860, although in 1860 we paid just about one-half the wages we do now. Our lumber was about one-half. Metals in 1860 were a little higher, however, than in 1900, except scrap iron, which has about the same price.

Mowers and reapers.—1900 was an exceptional season, owing to the increased cost of material and prices, which were about 10 per cent higher than in 1899.

Plows.—The difficulty of ascertaining the price of plows is expressed by a prominent plow company as follows: It is utterly impossible, on account of the great variety of prices which we have to make, to fill out this list for you with any degree of satisfaction, for the reason that our list prices have changed constantly. They run up and down, and our discounts vary also. To make up the statement would require a great deal of work, and after it was all finished would require considerable figuring for anyone interested to find out the desired results. If we were manufacturing one thing it would be different. If our list prices remained one season with another, or discounts were the same, it would be easy, but our list prices will probably vary up or down twice a year, and our discounts vary considerably. The size of the order controls the price. The terms of payment control the price to a considerable degree, so it is utterly impossible for us to make this up on our line of goods in a manner that will be at all satisfactory.

Plows.—There is such a variety of plows, and they have changed so in the last ten years that it is very hard to make a comparison which is correct, and, as you state, what was a standard plow ten years ago would be very much out of date to-day. Discrepancies as to price are quite largely due to the invention of machinery or to the very large increase in sales which enables any manufacturer to place goods at a lower price, even though material may sometimes cost more.

Thrashers and traction engines.—The small variation in price is caused by the increased cost in material and labor, this being caused by the additional weight. Some of our machines weigh more than 50 per cent more than in 1888.

Thrashers.—The writer began business in ——. Great improvements have been made since that time. Not only has the price been reduced, but the practical efficiency of the machines has been more than doubled.

Thrashers.—Cost of production, owing to improvements and attachments, has increased from 10 to 20 per cent, but the capacity of the machinery has been increased from two to fourfold.

Wagons.—Wagons are now so much improved since 1860, and later on up to this date, that if a wagon of 1860 has been sold at \$60, wagons of the present style and with successive improvements are worth one-third more, while they sell for \$10 less at present.

